S. HRG. 98-27

NATIONAL TRANSPORTATION SAFETY BOARD REAUTHORIZATION

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

ON

REAUTHORIZATION OF THE NATIONAL TRANSPORTATION SAFETY BOARD

FEBRUARY 28, 1983

Serial No. 98-9

Printed for the use of the
Committee on Commerce, Science, and Transportation

U.S. GOVERNMENT PRINTING OFFICE

17-869 O WASHINGTON : 1983

5261-29

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NATIONAL TRANSPORTATION SAFETY BOARD REAUTHORIZATION

MONDAY, FEBRUARY 28, 1983

U.S. SENATE,
COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON AVIATION,
Washington, D.C.

The subcommittee met, pursuant to notice, at 1:31 p.m., in room 253, Russell Senate Office Building, Hon. Nancy Kassebaum (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Kathy Meier, staff counsel; and Steve Palmer, minority staff counsel.

Senator KASSEBAUM. It is a pleasure to welcome the National Transportation Safety Board.

Senator Hollings has a statement which will appear in the record at this point.

[The statement follows:]

OPENING STATEMENT BY SENATOR HOLLINGS

Today, we consider the reauthorization of the National Transportation Safety Board (NTSB).

I note that this three-year authorization request would allow NTSB to continue operations at roughly existing levels. This is an important point, as I believe the Board has provided us with an enormous amount of information in recent years on badly needed safety improvement.

The safety records of our Nation's airline, trucking, rail, maritime, and pipeline industries have improved as a result of the close monitoring and investigative work done by the Safety Board. I therefore look forward to supporting the NTSB authorization and supporting the appropriation of adequate levels of funding in order that it can continue to fulfill its large and extremely vital responsibilities.

Senator KASSEBAUM. And if you, Chairman Burnett, would like to lead off and introduce those accompaning you for the record, please. Then your testimony or any comments anyone would like to make, and questions.

STATEMENT OF HON. JIM BURNETT, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD, ACCOMPANIED BY PAT GOLDMAN, VICE CHAIRMAN; PETER KISSINGER, MANAGING DIRECTOR; JIM DANAHER, DIRECTOR, BUREAU OF TECHNOLOGY; THOMAS STYLES, DIRECTOR, BUREAU OF ACCIDENT INVESTIGATION; BARRY SWEEDLER, DIRECTOR, BUREAU OF SAFETY PROGRAMS; AND HERBERT BANKS, CHIEF, FIELD ACCIDENT INVESTIGATION DIVISION

Mr. BURNETT. Thank you, Madame Chairman.

It is good to be here. I am here to give you a report on the state of the Safety Board, and to tell you what we have done, how we think we have done, and what we need to do an even better job in the future.

I have brought another member of the Board with me today, as well as some of our staff members because I think it is important for the subcommittee to recognize what outstanding support I have had in conducting the work of the Safety Board during my first year as chairman.

With me today are Vice Chairman Patricia Goldman, Peter Kissinger, the Board's Managing Director, Herbert Banks, Chief of the Field Accident Investigation Division, Barry Sweedler, Director of the new Bureau of Safety Programs, James Danaher, Director of the Bureau of Technology, and Tom Styles, Director of the Bureau of Accident Investigation.

If it meets with your approval, Madame Chairman, I would like to submit my testimony for the record and summarize its contents for the subcommittee.

Senator KASSEBAUM. Thank you.

Mr. BURNETT. Now to the reason for our appearance. We are here today to request your support for the Safety Board's 3-year reauthorization request. Starting with fiscal year 1984, the proposed legislation would authorize the Board $22.6 million, which is only $500,000 above the current authorization. This would rise to $24.5 million in fiscal year 1985, and culminate with an authorization of $26.1 million for 1986.

Madame Chairman, I have been with the Safety Board just over a year. I came to Washington as one of the outlanders who had a healthy suspicion of Washington bureacracy. It has been a great honor and privilege for me to work with the men and women of the Safety Board during the past year. I know I am not an impartial observer, but I will say with confidence that the American public gets its money's worth for the appropriations and the resources that are provided the National Transportation Safety Board.

I can say that because of the outstanding dedication of our staff members, who often work unusual and long hours and under sometimes grim circumstances.

We experienced in fiscal year 1982 a budget reduction from $19.1 million to $17.1 million that took place in the middle of the year. That necessitated a 27-percent decrease in our total staff. At the same time we had, for the first time in 2 years, and within 1 month, two major airline carrier crashes. Before the end of that fiscal year, another air carrier crashed outside New Orleans, yet the Safety Board was able to keep up with its work. We did so with great difficulty, and we would not have been able to continue that for long had we not received supplemental appropriations for the 1983 fiscal year.

The Board currently is active in the investigation of the *Marine Electric* capsizing off the eastern shore. There are two other marine capsizings that we have investigators working on simultaneously.

We sent two teams in the last few weeks to Sun Valley, Idaho, to investigate two plane crashes, as well as a team to Brainerd, Minn., where a prop sheered off and went through the cabin, killing one and amputating the leg of another.

That is a sample of the kind of work that we are involved in at the present time. We have, in addition, completed in the last few weeks a report on the World Airways crash in Boston, and the *Ocean Ranger* capsizing off the coast of Newfoundland. Within the next month we will complete our report on the Kenner Pan American crash. On March 15 we will have a Board meeting for consideration of our follow-up report on the air traffic control system. On March 8 we will consider a major accident investigation report dealing with the general aviation jet crash.

Our Board is very busy. Nevertheless we have managed to make some substantial improvements in the way the Board operates since I have been Chairman. I will not take all the credit for it, certainly. Some of them were in progress or the thinking was going forward when I arrived at the Board, and we were able to either implement them or continue the implementation.

Because of reduced resources, we are now forced to be more selective in the kinds of accidents we investigate. We have tried to reassess, not only in the aviation area, but in our surface transportation accident investigations as well, the type of accidents we need to investigate, not basing them just on the number of fatalities, the public attention the accident gets, but on what kind of safety payoff we can get from conducting the accident investigation.

We have reached new agreements with the Federal Aviation Administration whereby we investigate a lot more accidents. We do more of those that do not involve fatalities, so that we have live pilots who often can give us more information needed to determine the cause of an accident than we can receive when the pilot is deceased.

In the highway area, where we can only investigate a fraction of the accidents, we have instituted a new program of directing our investigative resources toward issue areas, such as we are currently doing with child safety seats—investigating accidents that involve children, where either the safety seats were used or were not used, to determine how well they work if they were used and in what cases and what types of accidents they may prevent injuries.

Vice Chairman Goldman has been the leader in our campaign to increase usage of the child safety seats, and we have made recommendations to the Governors of the 31 States that do not now have mandatory child safety seat laws that they implement them. The Vice Chairman has conducted hearings in Dallas and Philadelphia, and has scheduled one for St. Louis in March in an effort to direct public attention to this very important safety matter. We hope that once we have a good, competent program in all the States of the union, we can achieve eventually a savings that may amount to up to 500 lives a year of children under 5, as well as prevent thousands from being crippled or disfigured. we believe this is a very important mission.

I have been a foremost spokesman for doing something about the problem of alcohol abuse in all forms of transportation. One of the recommendations we have made, again to the Governors and State legislatures, is that the drinking age be raised to 21. We have convincing evidence that when the drinking age is raised, it results in a substantial decrease in accidents and resultant savings in lives.

We hope all the States will implement this legislation. We have gone so far as to testify before the legislatures of several States, and are available to any other State legislatures that want our support.

In aviation, we are doing additional work in the area of general aviation crashworthiness. As you know, Don Engen, the most recent member of our Board, has a background in the general aviation industry and was a naval aviator. He is very interested in improving the crashworthiness of general aviation aircraft.

We have not been very successful over the years in getting the FAA to do anything about that, but we have had some voluntary progress from the general aviation industry. We sense that there is an opportunity to do more.

One of the problems is that there is not a market for a crashworthy aircraft, because most people in aviation perceive that if they crash they die, and there is no point in having any additional protection.

Our accident investigation records indicate that actually only 18 percent of the people involved in aviation accidents are fatalities, and that a great deal can be done to improve safety in the cockpit and the cabin in general aviation. One of the ways to achieve this is to create a demand for it within the general aviation community.

So what we are doing is trying to carry out a greater safety advocacy role. We feel it is not sufficient that we conduct accident investigations and make recommendations. We think we also have a responsibility to do everything in our power, including building a constituency for the implementation of these recommendations, to see to it that a safety reform is implemented.

Madam Chairman, I appreciate the opportunity to make this initial statement, and I would be very pleased to respond to the questions of the subcommittee.

Senator KASSEBAUM. Thank you very much, Chairman Burnett. It was an interesting report. Certainly, indeed, you have had a busy year, and I think the National Transportation Safety Board should be very proud of how it met some major challenges, many of them coming all at once in this past year.

Senator Goldwater, do you have any opening comment?

Senator GOLDWATER. Not yet.

Senator KASSEBAUM. Senator Lautenberg?

Senator LAUTENBERG. No.

Senator KASSEBAUM. I would like to start with a few questions that Senator Danforth had asked that I present to you regarding the highway program. Your budget request would allow the creation of new positions at the NTSB to deal with, among other issues, highway safety. What do you see as the Board's role in the area of highway safety? Do you envision the NTSB taking any specific actions in the near future in this regard?

Mr. BURNETT. We certainly do envision the NTSB as having a much greater role in highway safety. One problem we have had is that the surface portion of the Safety Board's training has been more or less borrowed from the traditions developed in aviation. But, unlike aviation investigation, our highway personnel have resources only to investigate a tiny fraction of the accidents that take place. Thus, we have to develop a strategy for focusing our accident

investigation process and for creating a recommendation system and safety advocacy system which is more appropriate to the highway industry.

We have certainly taken some steps to do this. We are planning, and have notices out now, to add several highway investigators to our field offices. With the addition of these investigators, we will be able to do more issue-oriented investigations, where we will seek to do, for instance, 45 accident investigations in a certain area to give us a picture of what the safety problems are, as we are doing now with the child restraint issue.

The Vice Chairman is here to answer any questions the subcommittee might have as to what we are doing in that area.

Senator KASSEBAUM. I would be curious. Do you coordinate in any way, particularly in the area of heightened interest that you are developing toward drunk driving or child safety, with the Department of Transportation and any of the work that they are doing?

Ms. GOLDMAN. We typically have notified the appropriate agencies within DOT. In the case of the child safety seat, we have coordinated with NHTSA to let them know this. We frequently depend on various local agencies of DOT to notify us about accidents, and it is mainly in the notification area that we primarily depend on the DOT.

Senator KASSEBAUM. And then you would make recommendations to the FAA?

Mr. BURNETT. That is correct.

Ms. GOLDMAN. In the child safety seat area, as in alcohol, since so many of the laws are locally implemented, and they vary from State to State, we have chosen the course of making recommendations to the States to implement these laws. I am happy to report that the Georgia Legislature passed the child safety seat bill yesterday in the house. So now both bodies in Georgia have approved this child safety seat legislation. New Jersey has passed it, I am told, in both bodies of the legislature, and is awaiting the Governor's signature, which we have been discussing with their staff in hopes that he will sign.

So, it has been much more of a cajoling, "working with" relationship than has been the tradition on the aviation side.

Senator KASSEBAUM. Regarding your mentioning raising the age to 21, how do you envision this working? Is this on a State level? And what role do you see from the Federal level?

Mr. BURNETT. As you know, the Congress approved as part of the Surface Transportation Assistance Act, a provision that the States raise the drinking age across the country to 21. I believe that if the Federal Government would impose something of that nature it would be discounted in the enforcement process. State and local agencies do not enforce provisions that are dictated to them by the Federal Government as enthusiastically as they do when their own legislature adopts it. In fact, most of the effort goes into devising compliance programs.

We feel, and certainly it has been borne out very strongly in the child safety seat area, that before the Federal Government could get a compliance enforcement system into position we could get a lot done at the State level, and we have chosen to go that way. We

do, of course, make safety recommendations to NHTSA. We commented on the rulemaking activities. For instance, we commented in opposition to their withdrawing standards for nonmetallic fuel tanks in auto tanks.

Senator KASSEBAUM. Pardon me, if I might. Another question in relation to this that Senator Danforth had was your reaction to NHTSA's actions in rescinding the passive restraint standard and the weakening of the automobile bumper standard.

Mr. BURNETT. Our position on the weakening of the automobile bumper is that it is a property protection issue more than a public safety issue. Although personally I would like to have a stronger bumper, we do not think that is really part of the central thrust of the Safety Board's mission. Our involvement in that issue would tend to draw us away from our main purpose, which is to preserve lives.

We have never commented on the passive restraint since I became Chairman, I think primarily because we try to base our recommendations out of the accident investigation process or accident data, and we have never had extensive accident experience with the airbags and restraints.

Senator KASSEBAUM. Since I have been on Senator Danforth's time, I want to ask an aviation question before we go on. How do you feel the FAA has responded to recommendations you have made regarding various safety factors? Do you feel that you have had a good audience there and that the FAA has complied in meeting some of your recommendations? Are you satisfied?

Mr. BURNETT. Over the years we have been most successful in getting our recommendations adopted by the FAA as compared to other agencies of the Federal Government. Probably that is due to a long history at the Safety Board or our predecessor, the Air Safety Bureau of the CAB, of working with the FAA. We have a well-developed relationship and understanding of how each other works.

Certainly, we have not had all of the FAA recommendations adopted that we would like. The FAA is more responsive to recommendations that are related to engineering fixes rather than some of the more innovative recommendations we make, such as crashworthiness or human performance standards.

Hopefully, we cam devise to do better in persuading them to adopt recommendations we make in those areas.

Senator KASSEBAUM. I think Senator Goldwater has some questions on aviation.

Senator GOLDWATER. What percentage of aircraft accidents do you attribute to pilot error?

Mr. BURNETT. Mr. Banks, would you like to respond to that question?

Mr. BANKS. Yes, Mr. Chairman.

Senator Goldwater, as far as pilot error is concerned, we are talking about almost 80 percent.

Senator GOLDWATER. I thought it was about 94 percent.

Mr. BANKS. That figure has started to decrease.

Senator GOLDWATER. What percentage of your aircraft accidents, particularly in corporate and private fields, are attributable to drinking?

Mr. BANKS. Senator Goldwater, at the present time we are running about 11 percent where we find traces of alcohol during the postmortem. Now, there are a lot of accidents that pilots survive, and under the present regulation we have no way of knowing whether or not there is alcohol involvement if the pilot survives. The 11 percent reflects the ones that we have the actual results of the toxicological tests where we find traces of alcohol.

Mr. BURNETT. In many of those accidents, Senator, we do not find alcohol to be causal because the accident was attributable, for instance, to some aircraft factor, but we are doing some further study on that to see exactly what percentage may be causal.

Based on available data, we have found that maybe 4 or 5 percent of total general aviation accidents involved alcohol as a causal factor. But since we only have postmortems in part of those, due to the fact that some pilots live and some of the bodies are so badly damaged in the accident that a test is not possible, we have an underestimate of the real nature of the problem.

We think that 10 or 11 percent is probably a more accurate figure. We have to assume that some percentage of those accidents probably are not related to alcohol consumption.

Senator GOLDWATER. Of course, the cause of accidents from alcohol there is probably no way of determining if the pilot who takes a drink and then flies, or has had a few drinks the night before and then flies, has had his judgment impaired. My favorite reading in the AOPA magazine are the accident reports. Invariably it adds up to some guy that's had a belt too many, and he cannot figure out what the approach speed should be or where he is in relation to the glide path.

Now, why do you think it takes so long for your accident investigations to come up with an answer? For example, the DC–10 at Boston. Again, I think this is largely pilot error, because while I think your recommendations that landing information include the degree of icing on the runway, or the degree of slickness, some runways are antiskid. But I maintain that the pilot overstretched his landing. That is not your fault. It is not the fault of the tower. It is the fault of the pilot. I do not care how many years we fly or how many years we drive cars, there are going to be people causing accidents, and there is no way you can pass laws to stop that.

But why would it take so long to decide that the DC–10 skidded off the end of a runway because it was going too fast?

Mr. BURNETT. Senator Goldwater, our Boston accident investigation followed just after we had taken our budget cuts and we had a very severe reduction in staff. It also followed our Air Florida accident investigation. It was not of the same magnitude, and so to some degree took second fiddle.

In addition, the investigator in charge of that accident was ill for some period of time, so rather than transfer the work to some other investigator, and we were in short supply at that time, we waited for him to return and complete that investigation.

Senator GOLDWATER. How big is your staff?

Mr. BURNETT. Right now we have about 300 people on board.

Senator GOLDWATER. Three hundred people?

Mr. BURNETT. That is correct.

Senator GOLDWATER. It takes that long to find out why an airplane went off the end of the runway?

Mr. BURNETT. Well, we have about 3,500 aviation accidents to investigate every year.

Senator GOLDWATER. Well, let's get back to the crash of Air Florida. Boeing had published information, I do not know how long before the accident, stating that air intake icing was possible. Certainly every pilot knows that if you try to take off with ice on the wings, that airplane is not going to fly too well. Again, pilot error.

But why did it take so long to reach a decision? Particularly when all the circumstances that could add up to that crash were known and were written about by the manufacturer of the airplane? I do not want to be overly critical, but I want to know why it takes so long to find out why somebody has made a mistake.

Mr. BURNETT. Senator, I think those of us who were involved, and I was on the scene with the investigation of the Air Florida accident, had an idea of what caused that accident within 2 days after it happened. But we are charged by law with determining probable cause, and part of that process is to exclude all other possibilities.

In both the Boston runway and Air Florida accidents we conducted sophisticated computer simulations to prove what we suspected. We could then issue a report that the aviation community could accept and would act upon.

I think with Air Florida, although the issue of ice on the wings was very obvious from the beginning, a lot of people were surprised by the fact that there were other issues. For instance, the inlet probe icing had affected the instrument readings, and even though that had been recognized as a potential problem, I do not think it was fully appreciated throughout the community, and little attention had been drawn to it.

The process of documentation we used helped to convince the industry that there was a problem and helped us achieve reform.

Senator GOLDWATER. Have you ever considered taking the privilege of takeoff decision away from a pilot, particularly in commercial? I am not talking about the person who flies pilot like I do and wants to go regardless.

Would it be within the realm of good judgment? I know the airline pilots would scream like hell if you told the center that under prevailing weather, visibility, icing and temperature, dew point and so forth, we do not think we are going to let you take off.

Mr. BURNETT. Senator, that certainly has been suggested, and the Board made a recommendation of that nature at one time. A lot of our staff has reconsidered in the meantime.

Senator, my personal feeling—the Board has no formal position on it at this time—is that that would be a very unfortunate thing to do. I do not think the air traffic control system is a model decisionmaking process. My feeling—and I keep an open mind; I can be convinced to the contrary—is that the decisionmaking process is best left in the cockpit with the person who knows best the performance capabilities of his aircraft.

I think most people who suggest that are thinking about a dual decisionmaking process where either the pilot or the controller would be able to scrub the flight. In effect that would increase the

pressure on the pilot to make a decision to go because the question he would receive afterward is why didn't you go when the controller was willing to let you? I think it could also tend to overburden an already strained air traffic control system.

So I think we would need to look at that with some deal of suspicion before we would make a recommendation of that nature.

Senator GOLDWATER. I am not advocating it. I am just exploring.

Mr. BURNETT. Senator, I did not really think you were.

Senator GOLDWATER. I am very concerned. I have been flying 55 years of my life, and I am convinced that most accidents are sitting over there in the left seat. That is one reason, by the way, just having gone through heart surgery, I quit flying, although I can fly under the law.

I think all pilots who fly for hire should take stress examinations. But we cannot get the military to agree, we cannot get the FAA to agree, and the airline pilots are going up the wall. Yet there are a lot of fellows sitting in that left seat who have had nothing but an ordinary electrocardiogram, and they are knocking 55 or 60 in the most stressful job made.

I am going to approach the chairman to have some hearings on this. I do not think we will get anyplace.

I have the same question, which I am not advocating, about the Boston accident. Have you recommended that the control tower or the center, whoever gives the final landing instructions—in most cases it is the tower—give the condition of the runway? In other words, determine how slippery the runway is. Boston has a terrible reputation on that runway. It is about as bad as some of our conditions at National, at least until they put the nonskid surface on.

But have you ever thought of including that in the final instructions and let the pilot make up his mind? If he wants to skid into the river, that is his business.

Mr. BURNETT. Senator, that is our position. We think that if we can get better information in the hands of the pilot, it would be the most effective thing we can do as far as promoting safety.

We certainly share your concern that we are not doing enough in the area of human performance, either in aviation or in any other mode of transportation. We have made a great deal of progress, particularly in aviation, in correcting vehicle factor problems. We have not made the same kind of progress in dealing with human factors problems, and it is time we faced up to it.

Senator GOLDWATER. You never will. That is the trouble with human beings, 7,000 years, and they are just as dumb as when they started.

Senator KASSEBAUM. Senator Exon?

Senator EXON. Thank you, Madam Chairman.

Mr. Burnett, let me try and amplify a question that my colleague from Arizona was trying to get to.

Have you ever considered legislation to restrict pilots from taking off, that is except Senator Barry Goldwater—it is possible that something like that would make some sense. I am not suggesting you answer the question.

Senator GOLDWATER. Make it the other way around.

Senator EXON. He wants it the other way around.

Madam Chairman, I want to start out by thanking and congratulating you for holding prompt hearings on the matter before us today, as I think they are of critical importance. I apologize for being late.

The remarks by my colleague from Arizona are extremely well taken. During this time when we are talking about sunsetting and how much money we are going to spend for various functions in the Federal Government, it is my perception, at least, that everybody is in favor of deregulating everything until we actually do it. I suspect that if we keep downplaying the role of the National Transportation Safety Board, making evaluations as to how effective it has been in the past or how not effective, depending on how you want to phrase it, the first time we have a major accident, there is going to be a hue and cry once again for more regulation, safety wise, than even before.

I just want to note how man's ability to transport himself and his belongings has increased dramatically, due largely to our ever-increasing technological capabilities. These improvements, which are well thought out and thoroughly tested, take us faster, further and safer than we have ever traveled before, despite the difficulties that you people wrestle with at all times. Yet, there remain many unexplained and uncontrollable factors that potentially could undermine the safety and therefore the continued operation of these transportation systems, that by and large have done a pretty good job in this country.

Stemming from this uncertainty, the need for an independent Board designated as the primary body for investigating transportation accidents, exploring safety issues, and recommending the necessary steps that must be taken to improve our safety record has never been greater. Nothing makes us more aware of this fact than the three major aviation accidents that occurred in this country last year, tragically claiming lives in New Orleans, Boston, and here in Washington, D.C.

Let me ask this basic question. Of those three accidents, which have all been bantered about a great deal, do you believe that any were possibly caused by improper manning of the control towers at those airports?

Mr. BURNETT. We found in the Boston accident that one of the causal factors was the lack of transmission of information through the air traffic control system to the pilots. However, I saw no reason to believe, nor did the Board find, that this situation developed because of the strike which occurred in August of 1981.

Senator EXON. Mr. Burnett, let me preface this next question with a statement to try to put it in perspective.

I have a specific concern with one result of airline deregulation, that being fare discrimination, which is causing a great deal of concern in my midcentral part of the country today.

This last weekend on a trip back to Nebraska, both going out and coming back, there were members of the traveling public that came up to me and showed me the different fares on their tickets. Now, this was not from New York to San Francisco. This was the confusion of the pricing of fares on a run from Washington, D.C., to Lincoln, Nebr.

Now, some of it had to be, I am sure, legitimate mistakes that were made by either the ticketing agent or the airline that issue the ticket. But I want to assure you, even though it is not your area of responsibility, but it fits into our responsibility, Madam Chairman, of the great concern that the people have today with regard to whether and how they were getting the best fare.

We say to them that it is the free enterprise system at work, and that the traveler has a responsibility to shop around to get the best bargain. But you see, the people do not understand that. Historically, when they bought a ticket on an airline, they were used to paying the same fare regardless of who the carrier was.

So it seems to me that while that has nothing directly to do with your responsibility, it possibly does with regard to the Civil Aeronautics Board. And I suggest, Madam Chairman, that it might be worthwhile for us to look into that one of these early days.

Senator KASSEBAUM. I agree.

Senator EXON. Because if we do not, we are going to see an outcry of some type of reregulation. We are basically all for deregulation, but some of the practices that this has brought about are still causing tremendous confusion out there in the public mind.

Senator KASSEBAUM. Well, we hope to hold oversight hearings in late spring.

Senator GOLDWATER. Would you yield?

Senator EXON. I would be happy to yield.

Senator GOLDWATER. I can get to my home town of Phoenix and back for anywhere from $220 to $850. I would like to have some of those guys explain to me the difference in cost.

Senator EXON. That is the free enterprise system at work.

Senator GOLDWATER. Well, it is not working right.

Senator KASSEBAUM. Aren't you glad the NTSB does not have to deal with this?

Mr. BURNETT. Madam Chairman, I would say that what we are trying to do is see to it that when people pay their fare they buy a high degree of safety.

Senator EXON. But in regard to what Senator Goldwater just said, I think there is the same degree of safety or lack thereof on a $200 ticket as there is on an $800 ticket, in all likelihood.

Mr. BURNETT. I would think so, but if there was not, I think most of us would buy a $200 ticket anyway. That is the thing that is hard for those of us in safety to overcome.

Senator EXON. Just two quick questions, if I might, Madam Chairman, and then we will move on.

In your fiscal year 1984 budget, Mr. Burnett, you have requested an authorization of $22.6 million, as I understand it. In comparison the President's budget requests an appropriation of $19.7 million.

Is it possible for you in a few words to explain this seemingly large difference in what the committee is looking at here? What are the key differences between your request and the budget that the President has recommended?

Mr. BURNETT. We added about $500,000 to our authorization for fiscal year 1983. The authorization figure that has been requested is high enough to accommodate the fiscal year 1984 appropriation request we made to OMB.

Senator EXON. Well, are my figures right, that you requested $22.6 million and the President's budget requested $19.7 million? Are those accurate figures?

Mr. BURNETT. Our authorization request which we sent forward was $22.6 million, yes, sir.

Senator EXON. What about the President's request?

Mr. KISSINGER. Your numbers are correct, Senator.

Senator EXON. Can you tell me the reason for the difference, or did the President just say you can get by on $19.7 million while doing the same thing that you propose to do in your budget?

Mr. BURNETT. $22.6 million is the 1984 authorization request we sent to OMB which, according to law, we also submitted at the same time to Congress. The difference between those requests and the $19.7 million level essentially amounts to a difference of 22 additional positions over what we received from OMB. We can do our job with the lower figure, but we are, as I said in my prepared statement, a David with a Goliath-sized mandate, and we never have had the resources that we need to do our job. We are very used to getting by with whatever we have.

Senator EXON. Then if I interpret the answer to my question, the roughly $3 million difference is made up in the additional positions that you have recommended, is that correct?

Mr. BURNETT. That is correct.

Senator EXON. One more question for the record, and then I have some additional questions I would like to submit for written response.

As I understand it, in your testimony you have stated that the Board has sent investigators to aid the accident investigations in foreign countries, most recently for airline crashes in Brazil and Spain.

How do you select which accidents are appropriate for your involvement? Do you issue reports on these investigations along with your recommendation?

I assume that the reason you want to be involved in these investigations of foreign airline accidents is that they could involve similar circumstances or aircraft that would help you do a better job here. I assume that is the main reason. Is that right?

Mr. BURNETT. Yes. This relationship is governed by the treaty which establishes an International Civil Aviation Organization. We participate in foreign investigations at the request of the foreign countries, and whether or not they request our participation depends on many factors—the philosophy that exists in that country, the extent to which American products are involved and, of course, there are some countries which have very little accident investigation expertise and need this more than others.

We participated in the investigation of the accident in Brazil, which involved a plane chartered in the United States and carrying newsmen who were following the President. We also participated in the Spanish accident, which involved a plane bound for the United States carrying a large number of American citizens.

Under the treaties, we are not permitted to release any information about the circumstances of the accident. That is reserved to the nation in which the accident takes place. In some instances we formulate safety recommendations based on those accidents, al-

though it is more difficult to do that when we cannot discuss the circumstances of the accident. So if we have to issue an emergency recommendation, we sometimes have to find a similar accident to base it on rather than talk publicly about the circumstances of the accident. We cannot discuss the circumstances until the nation which has jurisdiction releases its report.

Senator EXON. If I understand you correctly, then, Mr. Burnett, if an accident occurs in some country, you do not go in unless you are requested by that country to join in, is that right?

Mr. BURNETT. That is correct.

Senator EXON. And if they do not want you to come in there, even if you think you should be in there, you cannot go.

Mr. BURNETT. That is correct also.

Senator EXON. But you have the option of whether you want to join in an investigation or not.

Mr. BURNETT. I do not know. Have we ever been requested and we declined?

Mr. DANAHER. No, sir.

Senator EXON. That was my question. In each case you have had the resources to go in and assist in these investigations where you have been requested to do so.

Mr. BURNETT. And we always do it in consultation with our State Department which sometimes requests our participation where we otherwise would not have gotten involved.

Senator EXON. Thank you, Madam Chairman.

I will have some other questions also for the record.

Senator KASSEBAUM. Senator Lautenberg?

Senator LAUTENBERG. Thank you, Madam Chairman.

First, Senator Hollings has some questions he would like to submit for the record, if you would please.

Senator KASSEBAUM. That will be done.

Senator LAUTENBERG. Just for my information, and forgive me if I slow the progress here, but there are a couple of things that I have to get caught up with. I have long been interested in the subject of aviation. I served on the Port Authority of New York and New Jersey, and we, of course, have a lot of jurisdiction for major airports in the region. So I come here with, obviously, some preconceived notions, which you will see as we get along here.

As I understand it, the principal purpose of this inquiry is to see whether budgetarily you can do the job or the task that has been assigned to you and your staff in this critical area.

Do you see any impairment—I heard you say that you had been accustomed to making do in your department. Is there a penalty involved in being underbudgeted, so to speak? I assume when you requested $22.6 million, you felt that that was the budget necessary to do the tasks, to take care of the tasks that you have.

Mr. BURNETT. We felt that, yes, minimally.

A good example right now is that we have had several marine capsizings. We have a very small Marine Investigation Division.

How many people?

Mr. KISSINGER. A total of about 12.

Mr. BURNETT. A total of about 12 investigators, and there are three separate accidents that we are involved in that just happened

in the last few weeks. And of course, that is the way these accidents sometimes happen; they come in droves.

It would be nice to have more depth than we do. Even though that is one of our best-managed divisions, we have a backlog.

When we had our severe budget cut in 1982, we made major cuts in our highway investigative program because we had to determine the probable cause of all aviation accidents, while that is not the case in the highway mode. We had to make some hard decisions. We are now attempting to rebuild our highway investigative effort, and we are doing it with funds that the Congress provided us this year.

We are instituting a new human performance initiative with more specialists who can give us better accident investigation in the human performance area which, in all modes of transportation, is the primary factor. Even with the new people we are hiring this year, we will barely be staffed sufficiently to do what we need to do in that area.

We had to make substantial cuts in fiscal year 1982 in our training and participation in nonaccident investigation activities. Training is very important for our people because we have to be technically up to speed, or our investigations and recommendations cannot command respect. And it is also important for us to participate in transportation-related activities so that we can further, in those forums, the recommendations that we make. We cut that out almost totally in the previous year, although we have been able to participate to a limited extent this year. Whether we will be able to do so next year is going to be a question.

Senator LAUTENBERG. I am impressed with the length of my question. I did not realize I asked a question quite that long.

So, before this committee today you talked about hiring new people, while stating that the recent budget reductions have limited your personnel levels. You talked earlier to Senator Goldwater about the length of time required to do the Boston investigation. Senator Exon asked you about investigations that are conducted in other countries where they have accidents, and you said that the Board tries to provide cooperation when requested. Does that not all impinge on your ability to function? How many people, did you say 300 before, are at the Safety Board? Are these people all in the field?

Mr. KISSINGER. Our current ceiling is 325. We have about 300 permanent employees on board.

Senator LAUTENBERG. That is your ceiling based on the budget as it is presently authorized, or is that based on the fiscal year 1984 request?

Mr. KISSINGER. That is for both.

Senator LAUTENBERG. That is for both. So the $3 million will not cut into your staffing? Do I understand that?

Mr. BURNETT. Well, Senator, we are on record because we transmitted to the Congress the same time as we transmitted to OMB our request for our needs for fiscal year 1984. Had I not thought that the figure was necessary and needed to do our job, I would not have transmitted it.

Senator LAUTENBERG. OK. So by reverse logic, we are saying that you will not be staffed to the point at which you can operate, let's say, as efficiently as you would like.

Mr. BURNETT. As we would like, that is true.

Senator LAUTENBERG. It does cause delays in response and review?

Mr. BURNETT. In review, yes. We try to respond to accidents. Of course, certainly in aviation, we have no choice, although with the surface accidents we think we must investigate, we try to respond to those as well. We sometimes have to postpone review. As Senator Goldwater developed earlier, we do not get the reports out as soon as we would like because in the meantime we have to respond to other accidents.

Senator LAUTENBERG. Do you grade airports on their general safety character?

Mr. BURNETT. No. As a matter of policy we have avoided doing that.

Senator LAUTENBERG. Is that publicly or privately?

Mr. BURNETT. Well, we do not have the staff. Once we open that door of trying to do individual safety studies of airports, we would never have the resources needed to sustain it. It is not within any conceivable area of our staffing that we would be able to do that for all of the airports that we would be requested to do it for.

However, right now we are doing a special study which was instituted after I became Chairman, of the airport certification process in which we are looking at 14 major airports. These were not selected because they were deemed to be safety problems. We are trying to look at the certification process, to see whether or not the airports that were constructed prior to the turbojet era are as safe as the newer ones, and we are trying to look at the waivers that the FAA has issued the airports to see whether they have been sufficiently demanding. We are also checking to see if they have done what they should have done to require airports to upgrade themselves, even though they may be older airports.

In addition, we are looking at the water rescue capabilities of airports to see if the certification standards are adequate.

It is a way of overseeing, through the investigation of certain airports, the entire FAA airport certification process.

Senator LAUTENBERG. In the process of review, do you look at airports in other countries, particularly in terms of trying to understand what they do so that we might benefit?

Mr. BURNETT. Well, I think we always try to be open to new ideas and information, if that is the question. We do not investigate airports in other countries, but when it becomes necessary to make a safety recommendation, we like to know what the state of the art is throughout the world.

Senator LAUTENBERG. So you have that information submitted to you. I assume there is a network of information flow?

Mr. BURNETT. Yes. We try the best we can within our limited resources.

Senator LAUTENBERG. OK. Based on the information that does come your way, are American airports, in your view, as technologically up-to-date as some of the best we see in other countries?

Mr. BURNETT. I will ask Mr. James Danahar, the Director of our Bureau of Technology, to respond to that question.

Mr. DANAHAR. It is a rather difficult question to answer. Taking it literally and narrowly, there are some foreign airports which are better equipped than some of ours here.

Senator LAUTENBERG. Charles DeGaulle, for one?

Mr. DANAHAR. Yes.

Senator LAUTENBERG. Heathrow?

Mr. DANAHAR. Yes.

Senator LAUTENBERG. For adverse weather conditions and all?

Mr. DANAHAR. But immediately we have to decide whether we are focusing on airport there or one here, or whether we are talking about all of them over there or some selective grouping of them, or some comparable size here.

We believe that, based on our investigative experience and our general knowledge of the equipment and facilities at each, that U.S. airports compare very favorably with any of those worldwide.

Senator LAUTENBERG. Substantially better, if I can extend you a little bit, than foreign airports?

Mr. DANAHAR. I believe for comparable traffic volumes, yes. In other words, given so many operations at a foreign airport on a comparable number here, ours generally are better equipped.

Senator LAUTENBERG. Is that something we ought to be looking at more closely, or do you feel we have sufficient information flow to stay up to date in terms of making certain that American airports do stay abreast of new developments and introduce them? We are, after all, talking about a matter of life and death in many cases.

Mr. DANAHAR. As you may know, FAA has a vastly larger organization than ours, and does indeed have representatives in most of the major industrialized nations of the world, and those offices are specifically tasked with that kind of responsibility. We do not have the staff nor the directive to do so.

But, Senator, I would emphasize we are on record as advocating improvements in airports in the United States and we are concerned that airport improvements are not going forward as fast as we would like them to, both in facilities and equipment and in the availability of airports to remove some of the strain on the major airports that are congested. And that is a very important safety consideration, so we think that there is certainly a need in this country for increased improvement and funds to improve airports.

In saying that, I would emphasize that, where the funds are available and from what the public use is, they might be taken as really beyond the scope of our expertise.

Senator LAUTENBERG. I am sorry, Madam Chairman, if I got us off the track. I appreciate that reminder about the FAA and its capability.

Problems for folks like the chairman and my colleague from Nebraska are new to me, coming from the Northeast. And I am the new person here. I sometimes ask questions that slow down the pace, but the voters of New Jersey tell me to do this.

Mr. BURNETT. Senator, I have just been here a year and I appreciate somebody else who came to Washington later than I did.

Senator LAUTENBERG. Well, the role of freshman is relatively novel to me apart from my hair color, but there is just one other thing I would like to ask about, and it is something that Senator Exon made reference to.

You said that in the investigation of the Boston accident that there was no evidence—you felt that the information flow could be better from the tower than at times we have. Is that a fair representation?

Mr. BURNETT. Yes, that is a fair representation.

Senator LAUTENBERG. Have you come to any conclusions about whether or not the staffing at towers throughout the country generally, despite the fact that we may not be able to pinpoint a particular causal relationship with an accident, do you think that staffing generally in the towers for safety reasons is where it ought to be, or would you rather not pass an opinion on that, or do you have a view?

Mr. BURNETT. We have scheduled on our Board agenda for our meeting on March 15 our follow-up report on the air traffic control system. The staff has a draft. The Board is examining it and I would rather not speak on that until they have had a chance to consider it.

However, we did do a study immediately after the strike took place, and that was adopted before I came to the Board. I am very comfortable with its findings, and we made the point in that study that the system could be operated safely if we managed the traffic levels sufficiently to give a margin for less experienced controllers and for less supervisory backup.

It is very important for everyone to understand that, although there is major economic pressure against traffic restrictions, the safety of the system now depends on how well those traffic levels are managed.

Senator LAUTENBERG. I am happy to hear that the safety level can be maintained. I submit—and perhaps forgive me once more; it may be outside the province of this inquiry, but it has created terrific economic costs and delays and is something, I think, that we ought to look at in the committee at a later date.

Thank you very much, Madam Chairman.

Senator EXON. Madam Chairman, one question.

Senator KASSEBAUM. Yes, sir.

Senator EXON. Mr. Burnett, perhaps you could answer this or someone seated there with you. After the New Orleans tragedy, I did quite a little reading on the accident. Somewhere it seemed to me that I read something about wind shear—is it going to be a problem that we should know about it in the future? If my memory serves me right, I think we had a wind shear tragedy involving a commercial airline at LaGuardia not too many years back.

The thrust of this article was that possibly we should do more research on wind shear. The article stated that wind shear is something that is very unpredictable, but can be tested. It concluded therefore, that we should have more wind shear wind testing areas around major airports. Have you at the Safety Board done any wind shear testing? Do you have any views on that, and do you think maybe we should require that the controllers at the major airports have more information on wind shear?

Mr. BURNETT. That certainly is the major issue in that accident investigation, although the Board has not adopted any findings. We hope that on March 22 the Board will meet to consider its report on the Kenner, La., accident.

Senator EXON. Well, let's just go back before New Orleans.

Mr. BURNETT. Generally we have been advocates of improved technology. We have been advocates of research and development to learn better methods to determine wind shear and, while this predates me somewhat, the low level wind shear alert systems that are in place now are systems that we advocated due to prior wind shear-related accidents.

I have testified to the effect that the FAA has not moved forward as quickly as it should with those research and development efforts. Unfortunately, it is not the kind of thing that can be done effectively and quickly because of the technological work that needs to go with it, but I think that more could be done. Certainly, as we see it, more should be done.

Senator EXON. Thank you. My friend from New Jersey indicates it was Kennedy rather than LaGuardia. Let the record be corrected.

Thank you, Madam Chairman.

Senator KASSEBAUM. Along that line, I know it is not the role of the NTSB to get into any cost-benefit analysis, but when you make a safety recommendation would it be perhaps beneficial to acceptance if you had the means to do a cost-benefit analysis on those recommendations?

For instance, when you make your recommendation to the FAA, do they do a cost-benefit study?

Mr. BURNETT. Frequently when we make recommendations, Madam Chairman, the agency will reply that they have done a cost-benefit study. Usually the result of a cost-benefit study is that they cannot implement our recommendation. There are probably some exceptions to that somewhere in history, but we would have to do some digging to find it.

Senator KASSEBAUM. Maybe you should do your own cost-benefit study.

Mr. BURNETT. I am not in favor of us initially doing cost-benefit studies. I wish we had some economic analysis capability, at the Board to analyze the cost-benefit studies they send back to us to see if they hold water.

Obviously, we are advocates for safety. We consider safety first, and we try to throw out new ideas and get them out into the community. Sometimes, perhaps, we are wrong when you look at the cost of the safety fix that we suggest, and when it is shown that we are mistaken, we ought to recognize it and seek some other remedy.

Cost-benefit analyses can be subjective and slanted to justify a previously determined point of view. They can also be irrelevant. For example, if we had done a cost-benefit study for the Louisiana Purchase or the purchase of Alaska, we may not have bought them. We would not have built the Washington Monument either. So I think that is not the only consideration. There is a basic element of justice. When someone purchases an airline ticket, we would like them to buy safety.

Senator KASSEBAUM. I just meant in light of getting readier acceptance, but if indeed you have found it to be true that the FAA comes back with the fact that they have already done such, then it would be interesting to be able to analyze that and give it some careful thought.

When you get such an answer, then what happens at that point? If it is something you feel strongly about, do you pursue it beyond that point?

Mr. BURNETT. We frequently reply that we disagree and continue our efforts. And, of course, one of the things that we are trying with our new Bureau of Safety Programs is do a better job on follow-up. We do accident investigations to learn what caused the accident. Then we make recommendations. We testify before Congress to inform people of what we found.

But we think we need to do a better job of educating the public so that we can build a constituency for safety. When we a get a rejection, we may conclude that this is because the public is not sufficiently aware. Let us go out and use the prestige that we gain from doing responsible accident investigations to help construct an educated populace which creates the educated consumer and who will in turn put pressure on the educated public citizen who can help us get those recommendations implemented.

Senator KASSEBAUM. Thank you very much. I say again that I do think the work in the past year that has been done by the NTSB has really been exemplary work and very beneficial. As this 3-year authorization is considered I think that you have many challenges, I am sure, still ahead of you.

I appreciate all of you coming, particularly Ms. Goldman and Mr. Burnett.

Mr. BURNETT. Thank you.

[The statement follows:]

STATEMENT OF HON. JIM BURNETT, CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD

Good afternoon. I'm here this afternoon to give you a report on the state of the Safety Board * * * to tell you what we've done * * * how well we think we have done it * * * and what we need to do an even better job.

But first let me introduce some of those who have made my report possible. With me today are Patricia A. Goldman, Vice Chairman of the Safety Board; Peter Kissinger, the Board's Managing Director; Thomas Styles, Director, Bureau of Accident Investigation; Herbert Banks, Chief, Field Investigation Division, Bureau of Accident Investigation; James Danaher, Director, Bureau of Technology; and Barry Sweedler, Director, Bureau of Safety Programs.

Now to the reason for our appearance. We are here to request your support for the Safety Board's three-year reauthorization request.

Starting with fiscal 1984, the proposed legislation would authorize the Board 22.6 million dollars, which is only 500 thousand above our current authorization. This would rise to 24.5 million in fiscal 1985, and culminate with an authorization of 26.1 million for 1986.

As in the past, the Board prides itself on being a well-managed agency—one that produces solid results for funds spent. Put another way, we try to deliver on our promise to improve transportation safety—and we try to do it in a very real world manner.

Let me give you just two examples. Over the years, aviation was plagued by a particularly traumatic type of accident whose cause was usually listed as "controlled flight into terrain." The translation of this technical jargon often was that the aircraft unknowingly flew into a mountain peak, or landed short of the runway because the crew was unaware of how close the aircraft was to the ground.

Unfortunately, the accident was far from uncommon. Between 1971 and 1975, the Board classified 17 air carrier accidents in this category—all of which involved fatalities. But today the threat has declined dramatically. The reason? A Board recommendation calling for the implementation of ground proximity warning devices has been implemented and all air carriers are now equipped with this crucial device.

A second key Board recommendation that has proven to be a silent safety sentinel was one that led to the installation of headshields, safety couplers and thermal shields on large railroad tank cars carrying hazardous materials. These safety devices have brought about a near 100 percent reduction in exploding hazardous materials tank cars—an accident with an awesome potential for death and destruction.

These are dramatic examples of what a well-drawn safety recommendation can accomplish. But there also are literally hundreds of other safety improvements implemented every year in direct response to Board recommendations. In addition, hundreds of safety problems are pointed out by Board investigators at an accident site, and the correction made immediately by local officials—without the need for a formal safety recommendation.

Like other agencies, the Board has taken its share of recent budget cuts. Because of that, we've had to further reorient our priorities this past year to insure a safety payoff using less funds. The impact has been felt in the Board, but I have no fear of challenge when I tell you that dollar for dollar—or by any measure you wish to use—the Safety Board has made very effective use of its share of the tax revenues.

Equally as important, we have tried to do it for the most part without issuing recommendations that would result in piling more regulations on a transportation industry which is just now beginning to operate without some of the constraints inherited from past eras.

What I have just said is not hyperbole . . . or bureaucratic bombast. It is fact. And it has been accomplished even though the Safety Board is a "David" with a Goliath-sized mandate.

As you know, the Board's accident investigation authority stretches across a very wide spectrum—aviation, highway, rail, marine, pipeline and hazardous materials.

But to simply mention these modes is not to convey their size—and therefore their impact on our daily life.

America's interstate highway system alone can circle the globe and still have 15,000 miles to spare. There are 110 million cars and trucks on our highways—which means one car or truck for nearly every second man, woman, and child in the country. In a world where many nations have only one airline—the United States has 63 scheduled airlines which operate a fleet of 2,500 jet aircraft, and provided the public with some 12,000 flights a day in 1982.

The American rail system is the largest in the world, a network of track spanning a continent. The industry's rolling stock alone amounts to one million eight hundred thousand freight cars and locomotives.

In the maritime industry, we are talking about a fleet of more than 500 ships. As for recreational boating, the total number is hard to comprehend—14 million recreational boats use the Nation's waterways.

Finally, there is the pipeline network, a 440 thousand mile intercity system that crosses mountains, prairies, and downtown metropolitan centers. But this mostly buried giant intrudes so seldom on our consciousness that many Americans never realize its size.

How does the Board manage to cope with a responsibility of this size?

To put it succinctly—it hasn't been easy. In 1982, for example, the Board took a severe mid-year budget cut—dropping its fiscal year appropriation from $19.1 million to $17.1 million.

The result was a loss of 85 employees, plus 83 percent of our temporary employees. That represented a combined total manpower reduction of 27 percent for the entire Board. As I said in testimony before Congress last year, these reductions sliced through whatever "fat" the agency could have had and cut into our muscle.

Two events, however, changed our course. One was Congressional approval of both a supplemental appropriation and a fund to cover emergency expentitures. In addition, the Board received appropriations for fiscal year 1983 which restored funding to a reasonable level for such crucial items as personnel training, equipment repair and purchase and travel expenditures—all of which had been virtually eliminated in fiscal year 1982.

But the threat of a continuing deficiency in our needed resources cannot be overstated. To bolster this point, let me give the Committee an idea of the Board's workload in the past year.

Just within the last two months, Safety Board go-teams have been sent to investigate the crash of a United Airlines cargo plane in Detroit . . . a corporate jet in Sun Valley, Idaho and a freakish accident that sent a propellor slicing through the passenger compartment of a Republic Airlines Convair attempting a landing at Brainerd, Minnesota. On December 13, 1982, the Board issued its finding of "probable cause" in the World Airways accident at Boston Logan International Airport where a DC-10—loaded with 212 persons—overran the ice and snow-covered runway and plunged into the waters of Boston Harbor, killing two passengers.

And still earlier, the Board determined the "probable cause" of Washington's own disaster—the crash of an Air Florida 737 into the Potomac River, a tragedy that claimed 78 lives.

Within the next several weeks, the Board expects to complete its report on the crash of a Pan American 727 at Kenner, Louisiana, which claimed 158 lives—making it 1982's worst aviation disaster.

This report will be followed shortly by three special investigation reports. One will deal with large aircraft operations on runways contaminated by ice and snow. The other will center on airport certification and operations at 14 major airports, including Washington National. Specifically, this last study will examine airport safety issues ranging from airport design standards to crash-fire-rescue capabilities and bird hazards. Also due soon is a report on the Board's second look at the safety of the air traffic control system since the strike by the Professional Air Traffic Controllers Organization.

But the safety of Americans at home is not the only concern of the Board. In 1982, for example, the Board sent investigators to aid in a series of accident investigations in foreign nations, including the crash of a Global International Airways Boeing 707 which had been chartered by newsmen covering President Reagan's visit to Brazil. Across the Atlantic, in Malaga, Spain, the Board provided assistance to the Spanish Government which is investigating the crash of a chartered DC-10 bound for the United States.

In sum, the Safety Board investigated 2,872 aviation accidents in 1982—that's 83 percent of the total accidents. This year we plan to investigate 3,150—which is expected to be 90 percent of the total.

What has come from the Board's investigations—its special studies and reports? Is aviation any safer? Have changes been made? We feel the answer to this is a resounding "yes."

Let me take one wide-ranging problem area—winter flight operations. In 1982, two of the five major air carrier accidents—World Airways in Boston, and Air Florida in Washington—involved winter flight operations.

In the case of Air Florida, the Board's investigation brought to light many issues involving long misunderstood aspects of cold weather operations, and within two weeks of the accident the Board issued 10 recommendations designed to correct the problems.

For example, the Board urged the FAA to immediately notify all air carrier operators of the potential hazard associated with engine inlet probe icing. The reason? The Board's Air Florida investigation had shown that the failure to turn on the engine anti-icing equipment permitted ice to block the engine pressure inlet probes. This, in turn, resulted in the cockpit instruments giving a misleading engine-performance indication. Because the crew failed to recognize the misleading indications, the ill-fated takeoff was attempted with considerably less engine power than normal—a factor that contributed to the crash.

Other recommendations centered on the proper use of deicing fluids and engine anti-ice systems. In answer to the recommendations, the FAA immediately issued telegraphic messages to all air carriers alerting them to the Board's recommendations.

On August 10, the Board issued still another set of 11 recommendations. These ranged all the way from changes in the operational procedures used by the crews of Boeing 737's, to the revisions in the water rescue plans for Washington National Airport.

In the World Airways case, the accident produced a similar range of recommendations because the Board said its investigation showed that—and here I quote from the Board report—"FAA and industry regulations and practices do not provide adequate guidance to airport management regarding the measurement of runway slipperiness; they do not provide flight crews with adequate means to evaluate runway conditions with airplaine stopping performance; nor do they provide runway length requirements for each airplane consistent with reduced braking performance on slippery runways."

These two "packages" of recommendations, I believe, will make winter flying operations safer. In fact, if they had been in effect at the time of the Air Florida accident and the World accident, neither may have happened.

But I don't want to leave the Members of this Committee with the idea that the Board is completely satisfied—that everything that could be done has been done. It has not.

For example, the FAA still has not implemented all of the Board's recommendations growing out of the Air Florida investigation. As the Committee Members know, the Board's recommendations are just that—recommendations. They do not carry the force of law. The FAA is, however, required by law to reply to the Board in 90 days, advising us whether it will accept our recommendations, or, if not, why not.

For example, the FAA has delayed a final decision on the Board-recommended changes in the operational procedures used by Boeing 737 flightcrews. The agency has advised the Board that any action on this recommendation must await completion of further wind tunnel tests on the Boeing 737. We intend to keep pressing on these recommendations—and several others—all of which the Board considers important.

Let me say a word here about a change in the Board's investigative procedures, which are the foundation for its safety recommendations. With less resources, we have to be more selective—that is we are concentrating more intensely on accidents which will provide an across-the-board payoff in safety. As a result, the Board has developed a new criteria under which our response will depend on these factors: The need for independent investigative oversight of certain specific areas in order to assure public confidence in the transportation system; and the need to concentrate on the most significant and life-threatening safety issues.

Thus, in aviation the Board has determined that its oversight responsibilities require full field investigations of accidents such as those involving commercial airline carriers, air traffic control, in-flight collisions, and newly certificated aircraft.

In the case of accident prevention issues, those accidents singled out for in-depth investigation will include—unauthorized flight into instrument weather conditions, instructional flying, and engine failures in light twin-engine aircraft which result in loss of control.

Similar investigative changes have been taking place in each of the other transportation modes. In rail, for example, the Board had had to discontinue the routine investigation of pedestrian or trespasser accidents. In addition, it will become more selective in investigating accidents with a property damage threshold between $150,000 and $500,000. This change in priorities will allow the Board to concentrate on significant rail safety issues such as passenger train or rail rapid transit accidents, hazardous materials accidents, accidents involving alcohol and drug abuse and rail-highway grade crossing accidents.

In the pipeline mode, investigations will focus on accidents involving excavation damage, highly volatile liquids, plastic pipe and other issues the Board identifies in safety terms as important.

In the marine mode, a new memorandum of understanding has been executed between the U.S. Coast Guard and the Safety Board under which the Safety Board will independently investigate major collisions between public vessels, and that includes Coast Guard vessels, and nonpublic vessels, as well as major marine casualties involving significant safety issues relating to such Coast Guard safety functions as search and rescue, aids to navigation, and vessel traffic services.

In the highway mode, the selectivity changes have been most significant—with the Board concentrating on such wide-ranging highway-related safety issues as alcohol, child safety seats, commercial driver licensing, bus safety, and the relationship of small cars to highway barriers.

In addition to the reevaluating of its accident selectivity procedures, the Board is taking the same approach to its other programs—including hazardous materials, safety recommendations, Federal rulemaking proposals, and safety studies—in hopes that more selectivity will produce increased safety benefits.

Let me cite here just two more areas where we hope to secure increased safety benefits. One is general aviation crashworthiness. The other is the long-neglected area of the "human factor."

In the case of crashworthiness, the Board's investigative efforts have succeeded in convincing the Federal Aviation Administration to reexamine its philosophy on crash survivability. As part of this reexamination, the FAA has initiated an extensive research program at its Technical Center in Atlantic City, New Jersey. The agency also has initiated a formal regulatory analysis of shoulder harness requirements in general aviation—the need for which was documented in the Board report

on "The Status of General Aviation Crashworthiness." In addition, the General Aviation Manufacturers Association is now supporting the use of shoulder harnesses throughout all aircraft in which it is feasible.

Finally, Board Member Donald D. Engen is contemplating holding a two-day public meeting on general aviation crashworthiness later this year which will draw together experts on the subject from both the public and private sector, including the Federal Aviation Administration, the National Aeronautics and Space Administration, and the General Aviation Manufactuers Association.

In the human factors area, which is intermodal, the Board simply must strengthen its expertise if it is to make further cuts in the accident death toll. In rail and highway, for example, the Board needs to know more about the underlying causes of a vehicle operator's failure to perform as expected. We also need to know still more about the more exotic causes of accidents ranging from equipment design to environmental factors.

In general aviation alone, 85 percent of the accidents involve human error in some way. Put another way, this year there will be upwards of 3,500 general aviation accidents—over 3,000 of these will be determined to have involved human error.

That is an unacceptable statistic, As a result, the Board is planning to increase its human factors staff by ten, including a medical doctor. Medicine is a critical discipline since both the Board's human performance and crashworthiness programs are highly dependent on medical findings and analysis.

So far in this testimony I have spoken a great deal about aviation accidents which are often the most dramatic and consume 50 percent of the Board's resources. But I want to emphasize again that the Board is making an all-out effort to increase its impact in the other modes—without lessening its effort in aviation.

To give you an example, I need go no further than this month when the Board completed its report on the sinking of the offshore drilling unit "Ocean Ranger," which capsized off the coast of Newfoundland, killing 84 persons.

In determining the cause of the tragedy, the Board said seawater entered the unit through a shattered porthole and splashed onto a ballast control console. This caused an electricl malfunction which resulted in a loss of control of ballasting and the unit capsized. One of the factors contributing to the heavy loss of life was the lack of exposure suits for crewmembers that could have prolonged life in the below freezing north Atlantic waters. The Board made a total of 31 recommendations designed to improve drilling rig safety, including a recommendation that U.S. drilling units operating in cold water be required to carry an exposure suit for each crewman.

In the pipeline mode, the Board achieved one of its long-sought accident prevention goals—the Department of Transportation's Materials Transportation Bureau issued a final rulemaking—effective April 1—which will require gas pipeline operators to either operate themselves, or participate in, some type of damage prevention program similar to the so-called "one call system." Over the last 10 years, the Board has repeatedly voiced its support for a one-call system—which is simply a central location where a contractor can learn—with a single telephone call—the location of all buried pipelines in the area he plans to dig. Why is this so important? Because the leading cause of all pipeline accidents is excavation-caused damage. Within the past year alone, the Board has investigated three major accidents triggered by excavation damage to pipelines, two of which were centered in populated downtown areas.

In the rail mode in 1982, Washington's Metro system had its first fatal accident when a rush hour train derailed, killing three persons. The Board's in-depth investigation prompted 37 safety recommendations. They ranged from improved emergency procedures to changes in Metro's operating rules to assure more positive control of trains operated manually.

I might note here that in 1970, the Board issued a special safety study on the then planned Metro system which pinpointed potential problems encountered in this accident, including faulty emergency procedures and inadequate communications.

In a second major rail action, the Board completed a special investigation of eight significant subway fires on the New York City Transit Authority system. The investigation revealed serious problems in transit car maintenance, safety programs, and emergency preparedness. In addition to recommendations designed to correct the specific deficiencies, the Board recommended that an independent agency be established to oversee the safety of the New York City transit system—a recommendation I am pleased to report is supported by the Governor.

In the highway mode, I want to talk about a safety hazard that has become a national scandal—drunken driving.

In 1982, 25,000 persons died in alcohol-related accidents—5,000 of them teenagers. The injury toll is equally tragic—650,000 persons, many of whom were left with injuries of the magnitude of a severed spinal column, or a disfigured face. When you consider that this annual death toll has been holding steady for the last ten years, you realize that what you are talking about is 250,000 lost lives, and injuries in the multi-millions.

At the Safety Board, we are making a concentrated effort to do something about this long-neglected but obvious safety issue. In fact, it has become one of the Board's major priorities. The reason? We are convinced that there is a way to help cut part of that toll, and it is relatively simple—raise the drinking age to 21. In July 1982, the Board sent a recommendation to the governors of 35 states and the District of Columbia urging them to support the idea. Why? Because the available data shows a direct correlation between the minimum drinking age and alcohol-related accidents in the 18 to 21 year old age group. Briefly, let me cite a few examples. In Michigan, in the first 12 months after the drinking age limit was raised from 18 to 21, a study showed a statistically significant reduction of 31 percent in alcohol-related accidents among drivers aged 18 to 20. In Illinois, a study showed an 8.8 percent reduction in nighttime fatal crash involvement among drivers affected by the higher drinking age. Finally another study estimated that in the 14 states that had raised their drinking age as of January, 1981, there were about 380 fewer young drivers involved annually in nighttime fatal crashes.

In the 31 states that still had a legal minmum drinking age less than 21 at the time of the study, it was estimated that 730 fewer young drivers would be involved in nighttime fatal accidents, if the legal drinking age was raised to 21.

That's a total of 1,110 fatal accidents prevented, and when you factor in the average number of fatalities involved in this type of accident, the total comes to 1,250 lives saved. That is exactly the kind of "payoff" the Board seeks for its programs. Those lives saved represent full value for the taxpayers money.

As you can hear, I am strongly—even emotionally—in favor of our recommendations to increase the drinking age. I will go even farther and say this—it is the single most effective step the states could take to bring about a decline in alcohol-related deaths among teenagers. But the Board's action did not stop with the issuance of a single recommendation. I have explained the Board's recommendation in appearances before State Legislatures in New Jersey, which now has increased its drinking age, Virginia, Nebraska and Wyoming. I also have communicated my willingness to make similar presentations later this year to other State Legislatures considering an "age 21 bill." In addition, I have made a series of speeches across the Nation which have attempted to solicit support for the concept from safety organizations. At this point, I believe the Board's recommendation has been markedly successful in helping to create a groundswell of opinion that could help stop this unnecessary slaughter of our young people.

But raising the drinking age is not the Board's only alcohol and driving campaign. In September of 1982, the Board issued a recommendation urging the Nation's Governors to establish highway safety programs that would encourage citizens who see drunk drivers to report offenders to the police.

One of the major problems involved in solving the drunken driving problem is that drunken drivers have little fear of apprehension. Why should they—statistics show law enforcement officials are able to stop only about one in a thousand.

But the Board believes drunken driver reporting programs could change these odds drastically. Simply put, the programs work this way. Posters are distributed by law enforcement agencies which carry a telephone number citizens can use to report drunken drivers. Brochures also are distributed listing ways to identify drunk drivers who often exhibit certain driving characteristics such as tailgating and weaving, and driving at night without headlights. Citizens are asked to provide police with the most recent location of the suspect, the license plate number, a description of the vehicle and the direction of travel. Of course, law enforcement officials have to observe for themselves any sign of drunken driving before they can stop a car.

What have been the results? In Nebraska, one of several states which already makes use of this type of program, 2,836 suspected drunken drivers were reported to the police between June 1981 and May 1982. As a result, the police intercepted 1,827 suspects and arrested 1,428 of them on charges of driving while intoxicated. In Colorado, police, over a 20 month period, stopped 2,701 drivers based on citizen reports and 1,661 of them were arrested on charges of driving while intoxicated. In Washington State, the results were equally as impressive with citizen calls resulting in police stopping 1,400 suspects and arresting 1,000 on drunken driving charges.

Again, this is the kind of direct, inexpensive, non-regulatory safety payoff the Board is seeking to spread to others via its recommendation.

I want to mention here one of the key initiatives undertaken by the Board in still another area of highway safety—child safety seats for automobiles. The death and needless disfigurement of young children in auto accidents is, like alcohol and driving, a tragedy society has too long neglected. The statistics show that more than 650 children are killed each year in auto accidents. The injury toll is over 50,000—many of whom are seriously injured or permanently disabled. What makes these statistics even more tragic is the fact that 90 percent of the fatalities and a great majority of the injuries could have been prevented by the proper use of child safety seats.

In December, 1982, the Board took the first in a series of actions to do something about this problem—it issued a recommendation urging the governors of 31 states which now lack laws on child safety seats to enact legislation requiring mandatory use of the seats for infants and children through age four. To add force to this recommendation, which was based on more than 30 Board-investigated accidents involving small children, Vice Chairman Patricia A. Goldman held public hearings on the issue in Dallas and Philadelphia, and is considering repeating the hearings in other cities around the Nation.

The Board's investigations and analyses have convinced it that the child safety seats are a life-saving asset. In one state, Tennessee—the first to adopt a child passenger safety law—safety seat usage rates have tripled and crash fatalities have been reduced by more than 50 percent. But a "law on the books" is not enough. As a result, the Board has issued a second recommendation to the same 31 states to develop a statewide child passenger safety program which would include aggressive enforcement of laws requiring use of child safety seats, and a child seat loan program for use by the public.

Here again, as in alcohol abuse, the Board's recommendations are not only designed to ease the problem, but also to focus national attention on the issue. Once that is achieved, society—the public and the private sector—can quickly agree on the needed changes.

Before I conclude, I would like to add just one thought. In reality, the Safety Board has only three products—an objective accident investigation, a probable cause given without fear or favor, and real world recommendations designed to prevent recurrence of useless death and injury. But those three products have helped give this Nation the safest transportation system in the world. With your help we plan to keep it that way.

That concludes my prepared remarks—I'm happy to respond to any questions you might have.

Senator KASSEBAUM. Thank you.

[The following information was subsequently received for the record:]

QUESTIONS OF SENATOR HOLLINGS AND THE ANSWERS THERETO

Question. The NTSB fiscal year 1983 authorization request of $22.6 million is only $500,000 above your current year authorization level. Will this slight increase provide you with an adequate level of funding in light of your responsibilities?

Answer. Yes, we believe it will. While it contains no provisions for significant unanticipated increases in our accident investigation programs, it does represent our best estimate of the full funding level needed to carry out the minimum essential program we have proposed to the Congress.

Question. What are the areas of transportation safety that you plan to emphasize in your research activities in the coming year?

Answer. The Board intends to focus its investigative activities, which result in accident investigation reports, safety studies and safety recommendations, on the following areas in the coming year: alcohol-related transportation safety problems, human performance caused accidents, occupant protection and hazardous materials involvement. We believe these areas, in which we are already working, are ones in which our efforts can contribute to a reduction in the number and severity of transportation accidents. As you know, such investigative activities constitute our only research, as we neither fund nor conduct basic or applied safety research ourselves.

Question. In your prepared testimony, you stated that one of your priorities was to raise the drinking age to 21 nationwide as a part of a campaign to eliminate drunk driving. How are you coordinating this effort with the National Highway Traffic Safety Administration (NHTSA) in the Department of Transportation (DOT), which is also striving for greater awareness of the drunk driving problem?

Answer. As you are probably aware, the National Highway Traffic Safety Administration (NHTSA) has included raising the drinking age to 21 as one of the criteria to attain supplemental grants in the Incentive Grant Criteria for Alcohol Traffic Safety Programs 408 pursuant to Public Law 97–364. We work closely with NHTSA in sharing information regarding state legislative action and rely heavily on their Fatal Accident Reporting System (FAR's) Data Base. NHTSA has been invited to several information exchange meetings on raising the drinking age sponsored by the NTSB and the National Safety Council.

Question. You also stated that the NTSB would no longer investigate accidents with property damages of less than $500,000. How was this level of damage determined to be the appropriate cut-off point? Is it because of a lack of funding that you do not investigate accidents having less costly damages?

Answer. By way of clarification, we no longer plan to routinely investigate accidents with property damages of less than $500,000. We will, however, investigate such accidents if they meet the other safety-related areas we have identified as offering the best prospects for tangible safety results, given our limited resources. For example, we will continue to investigate accidents involving property damage of less than $500,000 if they involve release of hazardous materials, two trains colliding, certain grade crossing accidents, etc. The reduction in the Safety Board's funding was the direct causative factor in our reconsideration of the property damage threshold, and it was selected primarily on the basis that the estimated number of accidents of that severity occurring correspond most closely with the numbers of accidents we could thoroughly investigate with our available staff.

Questions of Senator Exon and the Answers Thereto

Question. What percentage of your recommendations to the Department of Transportation and other agencies are actually implemented? Are there any agencies that are particularly unresponsive in terms of adopting NTSB's recommendations?

Answer. A chart regarding Board safety recommendations is below which will respond to the questions raised.

RATE OF ACCEPTANCE OF NTSB RECOMMENDATIONS BY REGULATORY AGENCIES IN EACH MODE

	1980			1981			1982		
	Number issued [1]	Number closed [2]	Rate of acceptance (in percent) [3]	Number issued [1]	Number closed [2]	Rate of acceptance (in percent) [3]	Number issued [1]	Number closed [2]	Rate of acceptance (in percent) [3]
Aviation:									
FAA	123	75	93	156	137	86	170	101	73
Other Federal	0	2	100	10	.....	.....	1	6	100
Non-Federal	9	1	100	.....	1	100	13	2	100
Total	132	78	93	166	138	86	184	109	75
Highway:									
FHWA	28	11	82	28	7	86	10	12	75
NHTSA	13	3	66	10	4	100	1	.....	.....
Other Federal	4	.....	.....	18	2	100	1	1	100
Non-Federal	34	7	86	36	5	100	48	5	80
Total	79	21	81	92	18	94	60	18	78
Railroad:									
FRA	12	8	100	12	15	40	6	36	42
Other Federal	8	1	100	27	1	100	1	24	83
Non-Federal	39	14	100	83	15	93	108	51	80
Total	59	23	100	122	31	68	115	111	68
Marine:									
USCG	78	25	44	45	65	55	13	33	42
Marad	.....	.....	.....	3	.....	.....	7	.....	.....
Other Federal	5	2	100	20	1	100	1	3	67
Non-Federal	34	3	100	26	9	100	34	6	100
Total	117	30	53	94	75	61	56	42	52
Pipeline:									
RSPA	19	7	100	9	9	89	3	8	25

RATE OF ACCEPTANCE OF NTSB RECOMMENDATIONS BY REGULATORY AGENCIES IN EACH MODE—Continued

	1980			1981			1982		
	Number issued [1]	Number closed [2]	Rate of acceptance (in percent) [3]	Number issued [1]	Number closed [2]	Rate of acceptance (in percent) [3]	Number issued [1]	Number closed [2]	Rate of acceptance (in percent) [3]
Other Federal	6				1	100			
Non-Federal	49	18	83	46	12	100	48	27	100
Total	74	25	88	55	22	95	51	35	83

[1] This column represents the total number of recommendations issued in the calendar year.
[2] This column represents the total number of recommendations closed during the calendar year, independent of the year, independent of the year in which they were issued.
[3] This column represents the percentage of those evaluated as acceptable action of the total number closed during the calendar year.

Question. Are there any tools that you use to encourage agencies to adopt and implement your recommendations?

Answer. In those cases in which agencies resist implementing Board recommendations we may use a variety of means to seek action, depending on the particular nature of the circumstances. For example, we may explore the agency's objections and seek a resolution through correspondence, staff-to-staff discussions and management level meetings. On occasions, we are able to argue forcefully for agency implementation of Board recommendations during our testimony on the agency's budget or during hearings on the specific issue involved. Of course, further accidents involving the issue addressed in the recommendation sometimes tragically provide a strong impetus to an agency to agree to recommendation implementation resisted earlier. Public speeches by the Chairman and other Board Members or news releases/press conferences calling attention to the agency's refusal to implement a particularly critical recommendation can also be very effective tools for persuasion. More recently, the Board has become very active in seeking out constituent groups with a strong interest in particular safety issues of concern to us and working cooperatively with them to bring about needed action.

[Whereupon, at 2:38 o'clock p.m., the subcommittee adjourned, to reconvene immediately in a further hearing.]

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